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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-----------------|----------------------|-------------------------|------------------|
| 10/681,597 | 10/08/2003 | Ehud Levy | 40654/293175 7162 | |
| 23370 7 | 7590 08/01/2006 | | EXAMINER | |
| JOHN S. PRATT, ESQ | | | SAMPLE, DAVID R | |
| KILPATRICK STOCKTON, LLP 1100 PEACHTREE STREET ATLANTA, GA 30309 | | | ART UNIT | PAPER NUMBER |
| | | | 1755 | |
| | | | DATE MAILED: 08/01/2006 | |

Please find below and/or attached an Office communication concerning this application or proceeding.

| | Application No. | Applicant(s) | | | | |
|--|--|---|---------|--|--|--|
| Office Action Comment | 10/681,597 | LEVY, EHUD | | | | |
| Office Action Summary | Examiner | Art Unit | | | | |
| | David Sample | 1755 | | | | |
| The MAILING DATE of this communication app Period for Reply | ears on the cover sheet with the c | orrespondence ac | idress | | | |
| A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING DA - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period w - Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b). | ATE OF THIS COMMUNICATION 16(a). In no event, however, may a reply be tim ill apply and will expire SIX (6) MONTHS from cause the application to become ABANDONE | J. hely filed the mailing date of this of D (35 U.S.C. § 133). | | | | |
| Status | | | | | | |
| 1)⊠ Responsive to communication(s) filed on <u>09 May 2006</u> . | | | | | | |
| 2a) This action is FINAL . 2b) ▼ This action is non-final. | | | | | | |
| 3) Since this application is in condition for allowan | 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is | | | | | |
| closed in accordance with the practice under E | x parte Quayle, 1935 C.D. 11, 45 | 3 O.G. 213. | | | | |
| Disposition of Claims | | | | | | |
| 4)⊠ Claim(s) <u>1-4 and 6-31</u> is/are pending in the app | olication. | | | | | |
| 4a) Of the above claim(s) <u>7-31</u> is/are withdrawn from consideration. | | | | | | |
| 5) Claim(s) is/are allowed. | | | | | | |
| 6) Claim(s) is/are rejected. | | | | | | |
| 7) Claim(s) <u>1-4 and 6</u> is/are objected to. | | | | | | |
| 8) Claim(s) are subject to restriction and/or | election requirement. | | | | | |
| Application Papers | | | | | | |
| 9)☐ The specification is objected to by the Examiner | | | | | | |
| 10) ☐ The drawing(s) filed on is/are: a) ☐ accepted or b) ☐ objected to by the Examiner. | | | | | | |
| Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). | | | | | | |
| Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). | | | | | | |
| 11)☐ The oath or declaration is objected to by the Ex | aminer. Note the attached Office | Action or form P | TO-152. | | | |
| Priority under 35 U.S.C. § 119 | | | | | | |
| 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). | | | | | | |
| a) All b) Some * c) None of: | | | | | | |
| 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No | | | | | | |
| Copies of the certified copies of the priority documents have been received in Application No 3. Copies of the certified copies of the priority documents have been received in this National Stage | | | | | | |
| application from the International Bureau (PCT Rule 17.2(a)). | | | | | | |
| * See the attached detailed Office action for a list of the certified copies not received. | | | | | | |
| | | | | | | |
| Attachment(s) | | | | | | |
| 1) Notice of References Cited (PTO-892) | 4) Interview Summary | | | | | |
| 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | Paper No(s)/Mail Da 5) Notice of Informal P | | O-152) | | | |
| Paper No(s)/Mail Date 20041025. | 6) Other: | • | • | | | |

U.S. Patent and Trademark Office PTOL-326 (Rev. 7-05)

DETAILED ACTION

Any rejections and/or objections, made in the previous Office Action, and not repeated below, are hereby withdrawn.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Specification

The disclosure is objected to because of the following informalities:

It is the examiner's opinion that the specification has numerous typographical errors where "µm" was inserted rather than "nm". The examiner has come to this conclusion after a careful reading of the specification, claims and prior art. The reasons follow.

The specification is directed to "fumed" transition metal oxides/hydroxides. See page 5, first full paragraph. The term "fumed" as it relates to fumed silica, for example, indicates a material having a particle size in the colloidal range. See the definition in <u>Hawley's Condensed Chemical Dictionary</u>, 2002. "Colloid" chemistry relates to materials having a size in the range between 1 nm and 1 µm. See the definition in Hawley's Condensed Chemical Dictionary, 2002.

The specification also describes the transition metal oxides/hydroxides as "nanoparticulates." See the first paragraph of page 5. A nanoparticle would have a size in the nanometer range, e.g., 100 nm, not a size in the μm range.

On page 11, third paragraph, the titanium oxides are described as atomically distributed or present in the form of particles less than about 0.1 µm. This matches the claim language in describing the transition metal oxides/hydroxides as atomically distributed or in the form of

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particles. The difference between this example and the claims is that the particles are less than 0.1 μ m (i.e., 100 nm) rather than 1-50 μ m. It is the examiner's general experience that the examples are descriptive of the claimed invention. In the present instance, none of the examples show transition metal oxide/hydroxide particles of 1-50 μ m.

For these reasons, the specification is objected to for using the words "fumed" and nanoparticulates in a manner that is abhorrent to their meanings. The words relate to nanometer sized particles but the specification employs the terms to describe micrometer-sized particles. In the alternative, the specification is objected to for using " μ m" in numerous places where "nm" is the correct unit.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 states that the material comprises "fumed transition metal oxides" The term "fumed" is generally associated with a fine powder of an oxide. In the preferred embodiment of the present invention, a "fumed" titanium dioxide would be a fine powder of titanium dioxide.

In contrast, claim 1 also states that the transition metal oxide/hydroxide is "atomically distributed"

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on or in the aluminosilicate." It is not seen how the transition metal can be present in the form of a fumed particle and simultaneously be atomically distributed in or on the aluminosilicate. It seems that the fumed particle must be dismantled during processing so that the transition metal

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can be distributed "atomically." Thus, the scope of the claim coverage cannot be determined

because the phrases "fumed transition metal oxides..." and "atomically distributed" appear to be

incompatible.

Claim 6 does not appear to further limit claim 1.

Claims 2-4 are rejected for failing to correct the deficiencies of claim 1.

Response to Arguments

Restriction

Rejoinder of non-elected claims will be considered when the product is found allowable

so long as the non-elected claims include all the recitations of the allowed product.

Inormation Disclosure Statement

Attached is an initialed, signed and dated copy of the IDS.

Prior Art Rejections

The prior art rejections have been overcome in view of the amendment.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Sample whose telephone number is (571)272-1376. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (572)272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

David Sample Primary Examiner
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